This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) An electronic device comprising:

at least two contacts; and

a monolayer of conductive organic material forming a conductive path between said contacts,

wherein said conductive path includes alternating ethynyl and aryl groups with at least one phenyl-ethynyl linkage, and at least one nitro electron withdrawing group.

2. (Original) The device of claim 1, wherein said device exhibits high and low conductivity states.

3. (Currently amended) The device of claim 2, wherein said high and low conductivity states are persistent and said device is repeatedly switchable between said persistent high and said low conductivity states.

4. (Original) The device of claim 2, wherein said low conductivity state has a current of less than about 100 pA.

5. (Original) The device of claim 4, wherein said low conductivity state has a current of less than about 1 pA.

6. (Original) The device of claim 2, wherein said high conductivity state has a current at least about 200 times higher than said low conductivity state.

7. (Original) The device of claim 6, wherein said high conductivity state has a current at least about 500 times higher than said low conductivity state.

8. (Original) The device of claim 7, wherein said high conductivity state has a current at least about 1000 times higher than said low conductivity state.

9. (Canceled)

10. (Canceled)

11. (Currently amended) The device of claim 1, wherein said nitro electron withdrawing group is bonded to a phenyl ring in the conductive path.

12. (Original) The device of claim 1, further comprising at least one electron donating group.

13. (Original) The device of claim 1, wherein said conductive path comprises atoms, at least 70% of said atoms being sp- or sp^2-hybridized atoms.

Claims 14-16. (Canceled)

17. (Original) The device of claim 1, wherein said conductive path further comprises binding groups which bind said conductive path to said contacts.

18. (Original) The device of claim 17, wherein said binding groups are selected from the group consisting of sulfur atoms, oxygen atoms, cyano, carboxy, diazonium salt, halide, isocyano, phosphine, and tellurium and selenium atoms.

19. (Original) The device of claim 1, wherein said conductive path comprises biphenyl groups.

20. (Canceled)

21. (Original) An electronic device comprising:

two contacts, wherein at least one contact is a palladium contact; and
a self-assembled monolayer of a conductive organic molecule comprising a phenyl-ethynyl-substituted phenyl-ethynyl-phenyl linkage between said contacts, wherein said substituted phenyl includes at least one nitro group, and wherein said organic molecule is bonded to said palladium contact by at least one isocyano group on a terminal phenyl of said linkage.

Claims 22-25 (Previously withdrawn)

26. (Original) The device of claim 1, wherein the device exhibits negative differential resistance at room temperature.